

Planning for Resilient Urban Forest

Understanding Tree Surveys, Assessments, and Preservation

September 23, 2026

MEET THE PRESENTERS

Brett Smith, PLA, AICP

- Bachelor of Landscape Architecture from Auburn University
- American Institute of Certified Planners member since 1994
- National Practice Leader of Planning & Landscape Architecture for Pape Dawson

Sandra DeWitt, ISA

- Bachelor of Science in Forestry from Auburn University
- ISA Certified Arborist
- Land Development Administrator and City Arborist for the City of Milton, Georgia

Mike Willis, PLA, ISA

- Bachelor of Landscape Architecture from The University of Georgia
- ISA Certified Arborist
- Landscape Architecture Senior Project Manager for Pape Dawson

By the end of this course, attendees will be able to:

- Understand the implications of local tree ordinances, policy, and enforcement.
- Evaluate and understand the tree data collection and assessment process.
- Evaluate Critical Root Zone protection and construction impact.
- Understand minimum tree density and canopy requirements.
- Apply an understanding of recompense values for tree removal.

TREE ORDINANCES

- Maintain tree coverage
- Promote environmental health of Community
- Provide Framework for vision and goals



MAINTAINING TREE COVERAGE

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ENVIRONMENTAL BENEFITS

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Shade



Stormwater



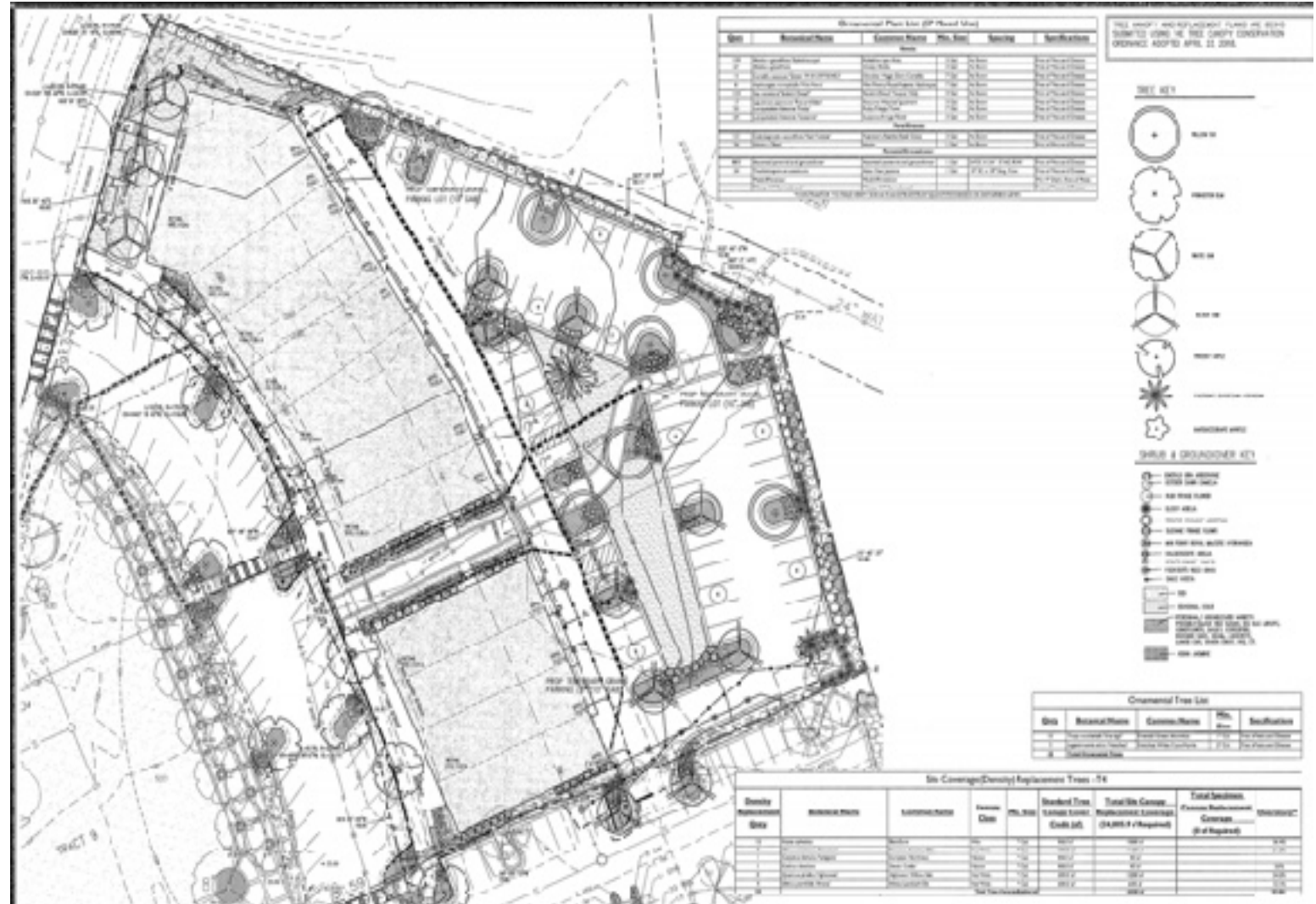
Health



Wildlife

FRAMEWORK

- Guidelines for Submittals
- Tree Conservation
- Tree Replacement
- Penalties and Enforcement
- Purpose and Intent



Boundary Tree: A tree on adjacent property whose root-save area extends onto the project site.

Critical Root Zone (CRZ): The area surrounding a tree that is essential to its health and survival.

Impacted Tree: A tree experiencing injury or destruction to more than 20% but no more than 33% of its root-save area.

Specimen Tree: Any tree which qualifies for special consideration for preservation due to its size, type, condition, location, or historical significance and which also meets minimum size criteria.

Structural Root Plate (SRP): The area of rapidly tapering roots that provides tree stability against windthrow.

TREE SURVEY, INVENTORY & ASSESSMENT

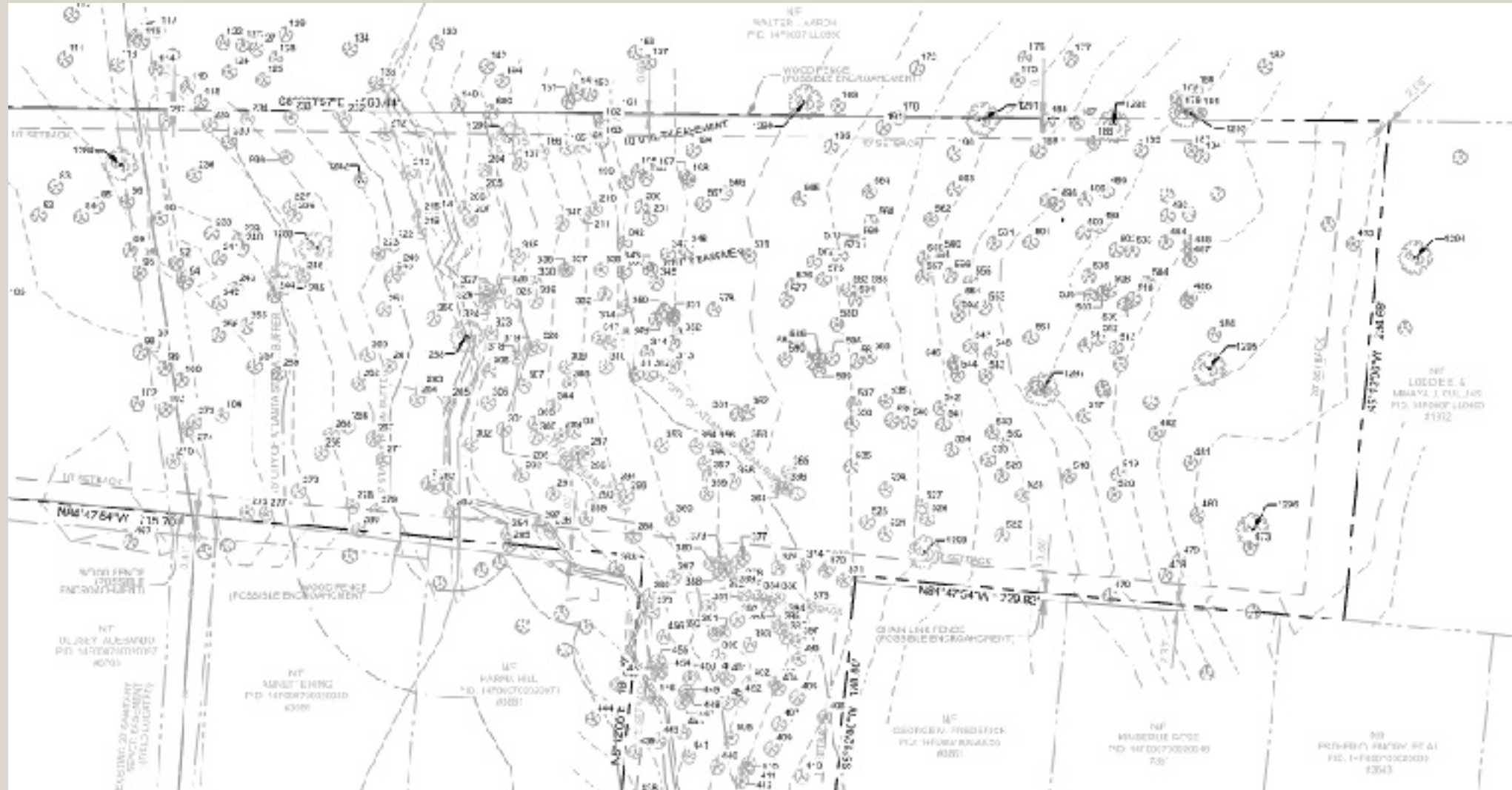
GPS & DATA COLLECTING

- Spatial Data
- Arboriculture Date



TREE SURVEY

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SPECIES IDENTIFICATION: CLASSIFYING BOTANICAL VARIATIONS



TREE SIZE: MEASURED VIA DIAMETER AT BREAST HEIGHT (DBH)

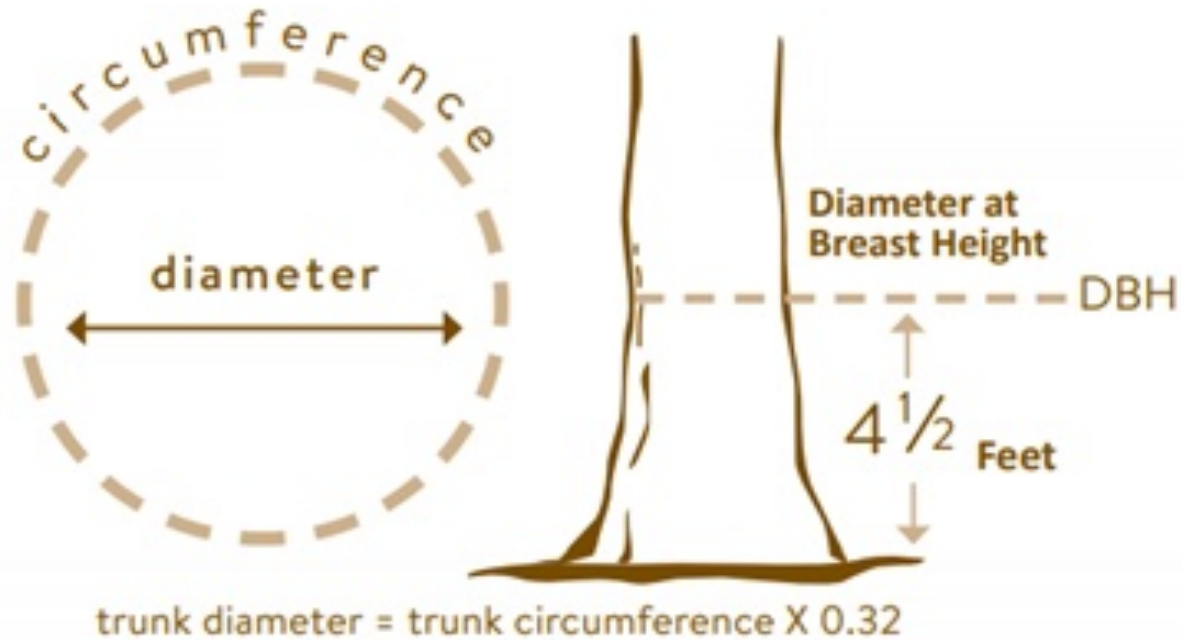


Illustration of diameter at breast height. Image courtesy of the Minnesota Department of Agriculture.



CONDITION & RISK ASSESSMENT

Health, Structure & Form

Tree Assessment Explained

Prioritizes preservation for Good & Fair ranked trees over Poor variants.

- **Excellent:** Nearly perfect health; no visible defects.
- **Good:** Normal vigor with minor defects or dieback.
- **Fair:** Reduced vigor; significant but likely nonfatal damage; up to 50% dieback.
- **Poor:** Unhealthy appearance, poor vigor, extensive dieback, or uncorrectable structural defects.
- **Very Poor:** Likely dying; severe defects with probable or imminent failure.
- **Dead**



HAZARD TREES

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Engulfing obstacles



Splitting due to weak union



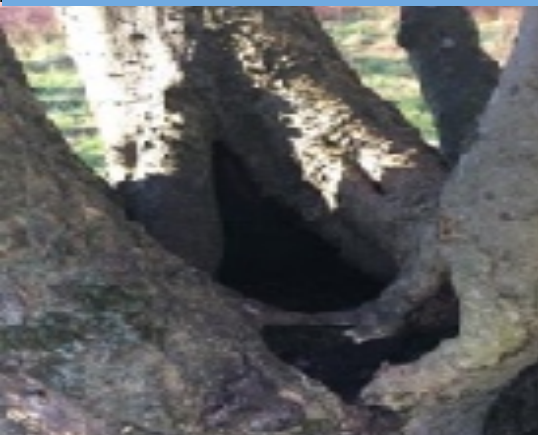
Damage caused by lightning



Wound caused by construction



Co-dominant branches



Heart rot



Girdled roots



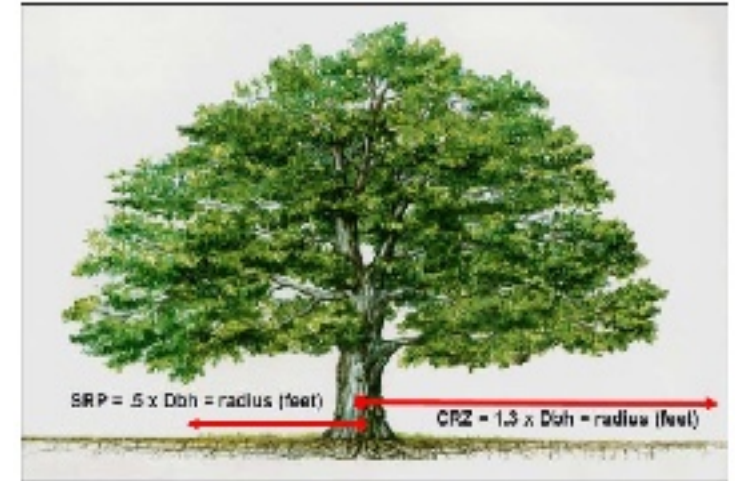
Trunk cavity

THE ABC'S OF CRZ'S & SRP'S

Critical Root Zone (CRZ)

Calculated as a multiplier of the tree's DBH to define the essential root preservation area.

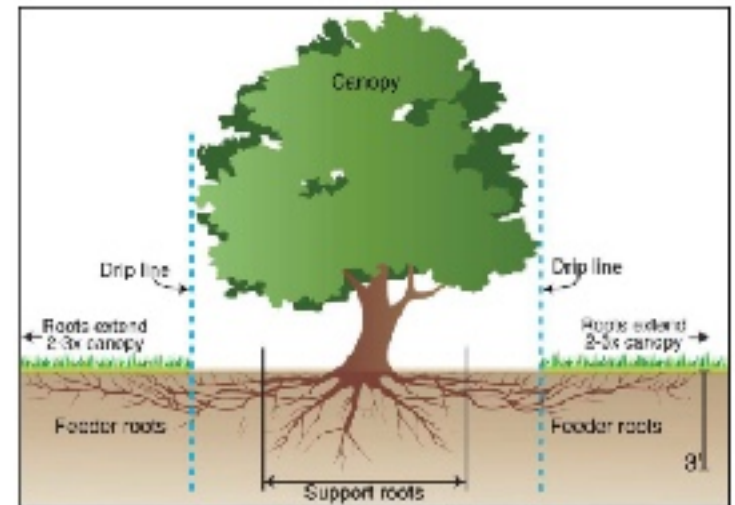
- City of Atlanta: 1.0' radius per 1" DBH
- Sandy Springs: 1.25' radius per 1" DBH
- City of Milton: 1.5' radius per 1" DBH



Structural Root Plate (SRP)

The core zone required for the physical stability and structural integrity of the tree.

- Standard Calculation:
0.5' radius x 1" DBH = SRP



CRZ DISTURBANCE LIMITS BY MUNICIPALITY

City of Atlanta

20%

Maximum Allowable
Encroachment /
Disturbance

Sandy Springs

25%

Maximum Allowable
Encroachment /
Disturbance

Forsyth County

25%

Maximum Allowable
Encroachment /
Disturbance

SPECIMEN TREE CHART

N.O.	SIZE (IN)	NAME	% CRZ IMPACT	SPEC. MEN?	SAVED?	UNITS	REC. UNITS	BOUNDARY?	STREAM BUFFER UNITS	STREAM BUFFER?
5684	30	Chestnut Oak		YES	Yes					
5685	28	Tulip Poplar		YES	Yes			Yes		
5686	33	Tulip Poplar		YES	Yes			Yes		
5687	11	Cherry		YES	Yes					
5688	15	Dogwood		NO	No					
5689	12	Cherry		YES	No		1.2			
5690	16	Cherry		NO	Yes	1.2				
5691	21	Cherry		YES	No		5.6			
5692	12	Cherry		YES	Yes	2.4				
5693	10	Cherry		NO	Yes	0.6				
5694	10	Cherry		YES	No		1.2			
5695	15	Cherry		NO	No					
5696	11	Cherry	20%	YES	Yes					
5697	17	Cherry	47%	NO	No					
5698	24	Sweetgum	7%	NO	Yes	2.8				
5699	12	Cherry	41%	NO	No					
5700	28	Cherry	14%	YES	Yes					
5701	11	Sourwood	1%	NO	Yes	0.6				
5702	11	Sourwood	13%	NO	Yes	0.6				
5703	10	Cherry		YES	Yes	2.4				
5704	18	Sourwood		NO	No					
5705	10	Sourwood		NO	No					
5706	25	Tulip Poplar		YES	No		7.6			
5707	26	Tulip Poplar		NO	Yes	3.8			3.8	Yes
5708	10	Sourwood		YES	Yes	0.6			0.6	Yes
5709	36	White Oak	1%	YES	Yes	6.5			6.5	Yes
5710	12	Sourwood		NO	Yes	0.6			0.6	Yes
5711	24	Chestnut Oak		YES	Yes	2.8			2.8	Yes
5712	25	Tulip Poplar		YES	Yes	3.8			3.8	Yes
5713	25	White Oak		YES	Yes	3.8			3.8	Yes

TIPS FOR PLANNING

- Clearly identify the critical root zones on the tree inventory plan
- Review Arborist Report to identify the trees or tree groupings suitable for preservation
- Identify Specimen quality trees and potential tree save areas

TREE PROTECTION STRATEGIES

- Identify high value trees & tree groupings
- Retaining walls to avoid CRZ disturbance
- Designated material staging and subcontractor parking
- Setback variance to protect tree groupings
- Avoid changing drainage patterns
- Avoid compaction – leading cause of tree decline in urban areas



NOT A STRATEGY

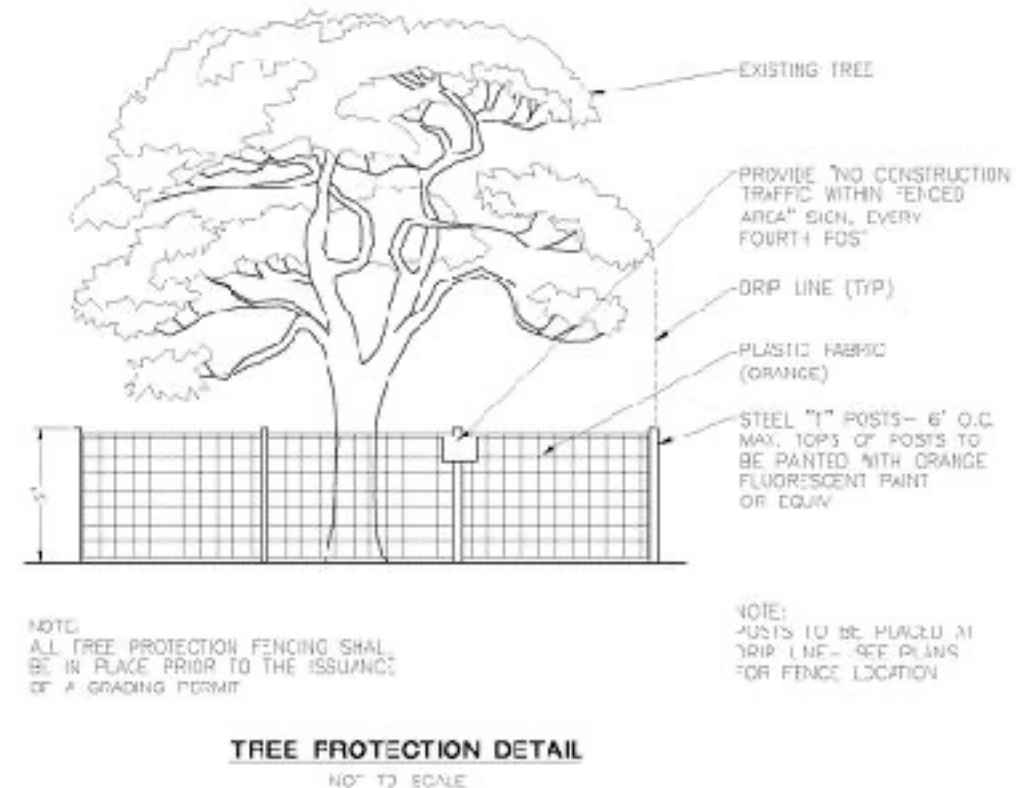
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TREE PRESERVATION STANDARDS

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- Protection of specimen quality trees
- Minimum tree density
- Minimum canopy coverage



SHOW ME THE MONEY!

- **\$140 per inch removed (COA)**
 - **Total inches removed – inches planted (x 1.25) = monetary recompense**
- **Unable to meet density or canopy requirements**
 - **Tree Funds or Tree Bank**
- **Recompense for removing specimen quality trees**
 - **1.5 – 4.0 X inches removed**
 - **Specimen recompense is in addition to all other density requirements**



PROJECT SUCCESS

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QUESTIONS?

**THANK YOU FOR
HAVING US TODAY!**

LET'S GO OUTSIDE!